# Shansan Gong

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## Education

**Shanghai Jiao Tong University**, Bachelor, IE, GPA: 3.84/4.3 Top 5% 2015.09 – 2019.06

**Shanghai Jiao Tong University**, Master, CS, GPA: 3.78/4 Top 10% 2019.09 – 2022.03

## Research Experience

My research interests include Text Generation, Pretrained Language Models and Information Retrieval.

### △ Scaling Demonstrations for In-Context Learning 2022.11 – Present

Due to the under-explored long-range language models, current works cannot investigate the in-context performance when we extend the examples for in-context learning demonstration.

*Second author. In-Context Learning with Many Demonstration Examples (ICML 2023 Under Review)*

- We propose a pre-trained long-range language model and tune it with instructions. We implement incremental encoding and circular position embedding to ensure the extrapolation and efficiency of the model.
- More examples both during instruction tuning and ICL can bring higher accuracy for downstream tasks.

### △ Diffusion Language Model 2022.06 – Present

Previous works mostly focus on either unconditional text generation or classifier-guided model, which are unable to deal with Seq2Seq text generation tasks.

*First author. Diffuseq: Sequence to Sequence Text Generation with Diffusion Models (ICLR 2023)*

- Propose a diffusion model which is designed for Seq2Seq text generation tasks and trained in a classifier-free manner. Also build the connection among AR, NAR, and diffusion models for text generation.
- Upon extensive evaluation over a wide range of Seq2Seq tasks, we find DiffuSeq achieving comparable or even better performance than six established baselines, including a state-of-the-art model that is based on pre-trained language models. The code is released at here, receiving more than 300 stars.

### △ Session-based News Recommendation 2020.06 – 2021.09

News recommendation for anonymous users is challenging because both the lifespan of news articles and the duration of user visits are short. Under the session-based scenario, we model the news recommendation task as the Next-Item Prediction task.

*First author. Modeling Implicit Feedback in Session-based News Recommendation (SIGIR 2022)*

- We leverage the positive/negative and neutral implicit feedback of the user to figure out to what extend the user likes/dislikes the article, which better tackles the user cold-start problem: we can make an accurate prediction about anonymous users earlier in the session.
- By proper representation of the content and temporal information in the sessions, our approach better handles the article cold-start problem and mitigates the dilemma between diversity and accuracy.

## Internship

**Microsoft STCA** NLP Engineer 2021.06 – 2021.09

In order to optimize the search result, it is necessary to judge whether the intents of different search Query1 and Query2 are consistent, which is formulated as a binary classification task.

- Based on the cross-language pre-training model InfoXLM, introduce PostWeb information (ie, text information such as the title, link, and abstract of the Query search result) as an additional feature of the Query.

## ♡ Honors and Awards

The Honor of Shanghai Outstanding Graduates Mar. 2022

Shanghai Jiao Tong University Wish Scholarship 2021

$2^{nd}$ *Prize*, China Post-Graduate Mathematical Contest in Modeling Nov. 2020

Shanghai Jiao Tong University Shenzhen Stock Exchange Scholarship 2020